



Prepared by the Statistics Department

Vol. 10, No. 5

JUNE 18, 1986

MAY 1986

ESTIMATED U.S. PETROLEUM BALANCE SUMMARY

Total products delivered continued the year-to-year increases of recent months, though the rise in May was somewhat less than in March and April.

The 382 thousand B/D, 2.5 percent increase was mainly the net result of a decline for gasoline, following strong growth in March and April, and large increases for distillates and kerosine jet fuel. Residual fuel oil deliveries also increased above last year's above-trend deliveries.

While domestic crude oil production declined from year-ago levels, crude oil imports rose to over 4 million B/D, one of the highest levels of recent years.

Input to crude oil distillation units at refineries was at the highest May level since 1980. High levels of gasoline production combined with the decline in deliveries led to a 14 million barrel increase in gasoline inventories.

PRODUCTS SUPPLIED

Gasoline

DELIVERIES' DECLINE MAY NOT REFLECT CONSUMPTION.

If recent gasoline supplied data were interpreted as actual consumption, the large swings of the past several months would represent very unusual behavior on the part of motorists. However, just as the March increase in gasoline supplied of 5 percent likely overstated the consumption increase, the 110 thousand B/D, 1.6 percent drop in gasoline supplied for May is unlikely to represent an actual decline in consumption since several factors point in the opposite direction. First, though retail prices for May rose 3 to 4 cents from the April average, more than half of this increase represents typical seasonal price variation; prices were still roughly one-fourth lower than in May 1985 and likely encouraged increased driving. Second, continued economic growth — real disposable income for the first quarter rose 2.8 percent versus the same period in 1985 — can also be expected to have added to miles travelled. One factor that may have been overrated in some quarters, however, is the effect of any reduction in foreign vacation travel by U.S. residents. Since, even at its peak, vacation driving probably accounts for less than 5 percent of domestic gasoline consumption, the impact on U.S. gasoline sales of any shift towards domestic vacationing is probably small.

The effects of higher income and lower prices are already apparent in first quarter data which show a nearly 5 percent increase in miles travelled year-to-year. If the growth in miles travelled has continued at this rate and fleet efficiency improvements averaged about 2 percent year-to-year, a net growth rate in gasoline consumption for recent months of about 3 percent is indicated. Thus, even the average 1.5 percent increase in deliveries during the past five months may understate true consumption gains.

Because of lower prices and higher income, and despite continued increases in average miles per gallon as older, less-efficient vehicles leave the fleet, the May decline more likely represents changes in nonprimary inventories.

Distillates

AHEAD ABOUT 2 PERCENT FOR FIVE MONTHS.

Following a small decline in April, May distillate deliveries rose by nearly 10 percent (238 thousand B/D), bringing the year-to-date increase to about 1.7 percent, or 3.8 percent on a weather-adjusted basis. Truck traffic, after showing only slight year-to-year improvement in the first quarter, jumped ahead more than 6 percent in April. Rail traffic has been about even with last year in recent months, though its share of distillate demand is only a fifth of the 38 percent

share for on-highway diesel; thus, if trucking activity continued to grow in May, at least 40 thousand B/D of the recent-months' average increase can be attributed to rising transportation use.

Residual Fuel Oil

STRONG GROWTH CONTINUES.

Year-ago May deliveries of residual fuel oil were roughly 200-250 thousand B/D above trend. Thus, though this May's deliveries show only a 31 thousand B/D (2.5 percent) increase from those of last May, the data actually indicate that the strength of residual fuel oil demand is continuing. Though some gas utilities have occasionally won back fuel-switching customers with new rates and other adjustments, the net shift in fuels has continued to favor residual fuel oil. Purchases of residual fuel oil were up 20 percent (about 90 thousand B/D) in the electric utility sector in the first quarter. Growth in the industrial sector appears to be somewhat smaller.

Kerosine Jet Fuel

FIVE-MONTH INCREASE PARALLELS MILES FLOWN.

Kerosine jet fuel supplied in May was almost 175 thousand B/D (19 percent) higher than last May. When averaged over the most recent five months the increase amounts to about 11 percent, a rate similar to recent increases in miles flown.

Other Oils

UP ABOUT 2 PERCENT.

Deliveries of other oils rose 1.7 percent in May. Petrochemical feedstock deliveries, which rose 25 percent (80 thousand B/D) in the first quarter, likely continued that growth. Butane use in gasoline blending has also likely been increased by recent high levels of gasoline production.

(In millions of B/D)	MAY ESTIMATES			YEAR-TO-DATE ESTIMATES		
	1986	1985	% Change	1986	1985	% Change
—Total domestic products supplied	15.8	15.5	2.5	16.0	15.6	2.1
—Motor gasoline supplied	6.9	7.0	(1.6)	6.8	6.7	1.5
—Distillate fuel oil supplied	2.8	2.6	9.2	3.1	3.0	1.7
—Residual fuel oil supplied	1.3	1.3	2.5	1.4	1.3	6.3

SUPPLY^{1/}

A 214 thousand B/D decline in domestic supply partially offset a 417 thousand B/D increase in imports, resulting in a net 203 thousand B/D increase in total supply.

Production

DECLINE CONTINUES.

Domestic production of crude oil fell 124 thousand B/D (1.4 percent) in May from the year-ago level because of declines in lower 48 production. Production in the lower 48 fell about 150 thousand B/D year-to-year, a reflection of the effects of crude oil prices roughly half of what they were at the end of 1985.

Imports

PRODUCTS DOWN BUT CRUDE IMPORTS HIGH.

Continuing the pattern of recent months, product imports again declined year-to-year in favor of increased crude oil imports and higher domestic refinery production. The net result was a 417 thousand B/D, 7.6 percent rise in total imports. While product imports declined 167 thousand B/D overall, residual fuel oil imports increased by about 56 thousand B/D. Year-to-date, a shift towards lighter products by domestic refiners and higher residual fuel oil demand have contributed to the 47 thousand B/D rise in residual fuel oil imports at a time when other product imports have declined 118 thousand B/D.

Crude oil imports rose to nearly 4.1 million B/D in May, slightly larger than last November's high level and one of the highest in nearly four years.

Inventories

GASOLINE UP, CRUDE OIL DOWN.

Total inventories ended the month 19 million barrels higher than for April, an increase in line with the average of the past decade. In past years, gasoline inventories have often declined during May. This year they rose about 14 million barrels and ended the month about 4 million barrels higher than last year, a result of high production levels and the decline in deliveries. High refinery utilization rates drew down crude inventories by 11 million barrels despite the increased level of crude oil imports.

Refinery Operations

UTILIZATION HIGHEST SINCE 1979.

Input to crude oil distillation units rose again in May by more than 1 million B/D compared to last May's input, reaching the highest May level since 1980. The 86.7 percent utilization rate was the highest for any month since mid-1979. Gasoline production averaged nearly 7 million B/D, a 450 thousand B/D, 6.9 percent increase over last May.

For most of this year, increased refinery operations have been accompanied by greater emphasis on the production of lighter products. Year-to-date, gasoline production has risen about 330 thousand B/D and distillate by 240 thousand B/D. Domestic production of residual fuel oil, though rising about 100 thousand B/D for May, declined nearly 50 thousand B/D for the first five months as a whole. As a result, higher residual fuel oil demand this year has been met by increased imports of that product.

(In millions of B/D)	MAY ESTIMATES			YEAR-TO-DATE ESTIMATES		
	1986	1985	% Change	1986	1985	% Change
—Total supply	17.2	17.0	1.2	16.7	15.9	4.5
—Crude production ^{2/}	8.8	9.0	(1.4)	8.9	8.9	0.2
—Crude oil imports ^{3/}	4.1	3.5	16.7	3.4	2.8	20.5
—Product imports	1.8	2.0	(8.4)	1.8	1.8	(3.9)

1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 500 million barrels as of May 31, 1986).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	MAY			YEAR-TO-DATE		
	1986 ¹	1985 ²	% Change	1986 ^{3R}	1985 ²	% Change
Products Supplied:						
Total motor gasoline	6,926	7,036	(1.6)	6,794	6,692	1.5
Finished leaded motor gasoline*	2,247	2,614	(14.0)	2,195	2,478	(11.4)
Finished unleaded motor gasoline*	4,679	4,422	5.8	4,599	4,214	9.1
Naphtha-jet	221	224	(1.3)	203	215	(5.6)
Kerosine-jet	1,075	901	19.3	1,052	947	11.1
Distillate fuel oil	2,838	2,600	9.2	3,087	3,036	1.7
Residual fuel oil	1,286	1,255	2.5	1,376	1,294	6.3
All other oils ⁴	3,759	3,697	1.7	3,770	3,685	2.3
Reclassified ⁵	- 262	- 252	4.0	- 314	- 224	40.2
Total domestic products supplied	15,843	15,461	2.5	15,968	15,645	2.1
Exports	771	705	9.4	815	760	7.2
Total products supplied	16,614	16,166	2.8	16,783	16,405	2.3
Supply:						
Domestic production:						
Crude oil ⁶	8,848	8,972	(1.4)	8,920	8,900	0.2
Natural gas liquids	1,601	1,607	(0.4)	1,664	1,619	2.8
Other supply ⁷	864	948	(8.9)	907	766	18.4
Total domestic supply	11,313	11,527	(1.9)	11,491	11,285	1.8
Imports:						
Crude oil, total	4,085 ^{10/}	3,501 ^{10/}	16.7	3,403 ^{10/}	2,824 ^{10/}	20.5
Canadian	670	496	35.1	548	476	15.1
Other	3,415	3,005	13.6	2,855	2,348	21.6
Products, total	1,827	1,994	(8.4)	1,769	1,840	(3.9)
Residual fuel oil	561	505	11.1	572	525	9.0
Other	1,266	1,489	(15.0)	1,197	1,315	(9.0)
Total imports	5,912	5,495	7.6	5,172	4,664	10.9
Total supply	17,225	17,022	1.2	16,663	15,949	4.5
Stock change, all oils	+ 611	+ 856	XXXX	- 120	- 456	XXXX
Refinery Operations						
Input to crude oil distillation units	13,452	12,302	9.3	12,502	11,773	6.2
Operable capacity	15,511	15,712	(1.3)	15,527	15,609	(0.5)
Refinery utilization (%) ⁸	86.7%	78.3%	10.7	80.5%	75.4%	6.8
Crude oil runs	13,243	12,141	9.1	12,323	11,646	5.8
Stocks (millions bbls.)	1986			1985 ²	% Change from ...	
	May 31 ⁹	Apr. 30 ⁹		May 31	Previous Month	Year Ago
Crude oil ^{10/}	326.3	336.9r/		356.4	(3.1)	(8.4)
Unfinished oils	113.9	110.1		114.0	3.5	(0.1)
Total motor gasoline**	220.2	206.6		216.6	6.6	1.7
Finished leaded motor gasoline*	70.4	65.0		75.6	8.3	(6.9)
Finished unleaded motor gasoline*	115.4	108.8		105.6	6.1	9.3
Naphtha-jet	5.7	6.3		6.4	(9.5)	(10.9)
Kerosine-jet	38.4	39.5		35.8	(2.8)	7.3
Distillate fuel oil	98.2	96.2		104.7	2.1	(6.2)
Residual fuel oil	37.0	36.5		41.8	1.4	(11.5)
All other oils	167.7	156.3r/		159.9	7.3	4.9
Total all oils	1,007.4	988.4r/		1,035.6	1.9	(2.7)

1/ Based on API estimated data converted to a monthly basis.

2/ Source: U.S. Department of Energy.

3/ Source: January-March, U.S. Department of Energy, April-May, API.

4/ Includes crude losses.

5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.

6/ Includes lease condensate.

7/ Includes unaccounted-for crude oil, refinery input of other hydrocarbons, and processing gain.

8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."

9/ Derived by interpolating API weekly stocks data.

10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.

R/ Revised.

* Included in motor gasoline.

** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.